



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,531	02/16/2007	Martin Stickel	2003P01010WOUS	3940

46726 7590 10/26/2011
BSH HOME APPLIANCES CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
100 BOSCH BOULEVARD
NEW BERN, NC 28562

EXAMINER

CAMPBELL, THOR S

ART UNIT	PAPER NUMBER
----------	--------------

3742

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

10/26/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

NBN-IntelProp@bshg.com

Office Action Summary	Application No. 10/581,531	Applicant(s) STICKEL, MARTIN	
	Examiner THOR CAMPBELL	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-52 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34-38 and 49 is/are allowed.
- 6) ☒ Claim(s) 22-28, 30-33 and 39-46 is/are rejected.
- 7) ☒ Claim(s) 29, 47, 48 and 50-52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3742

DETAILED ACTION

Response to Amendment

The amendment filed 3/29/2010 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: In other words, the connecting element (for example, channel bottom 22) that connects to a corresponding connecting feature of the continuous flow heater does not cross a plane that intersects and is parallel to the central area.

.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 22, 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Wade (US 941215).

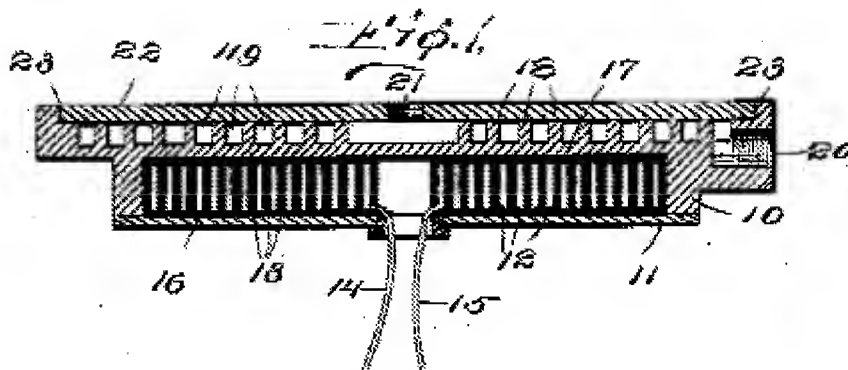
Wade discloses:

In reference to claim:

22. A heating device for fluids, the heating device being adapted for mounting thereof in a continuous flow heater, the heating device comprising: at least one heating element 12 configured as an electric resistance heater; and at least one heat exchanging element 18 for the exchange of heat between the heating element and a fluid, the heat exchanging element 18 being connected in a heat-conducting manner to the heating element and the fluid so as to transfer the heat generated by the heating element to the fluid and the heat exchanging element forming an integral housing component 10 of a pressure-resistant and temperature-resistant continuous flow heater and having a substantially planar

Art Unit: 3742

central area (recess) on which the heating element is mounted.

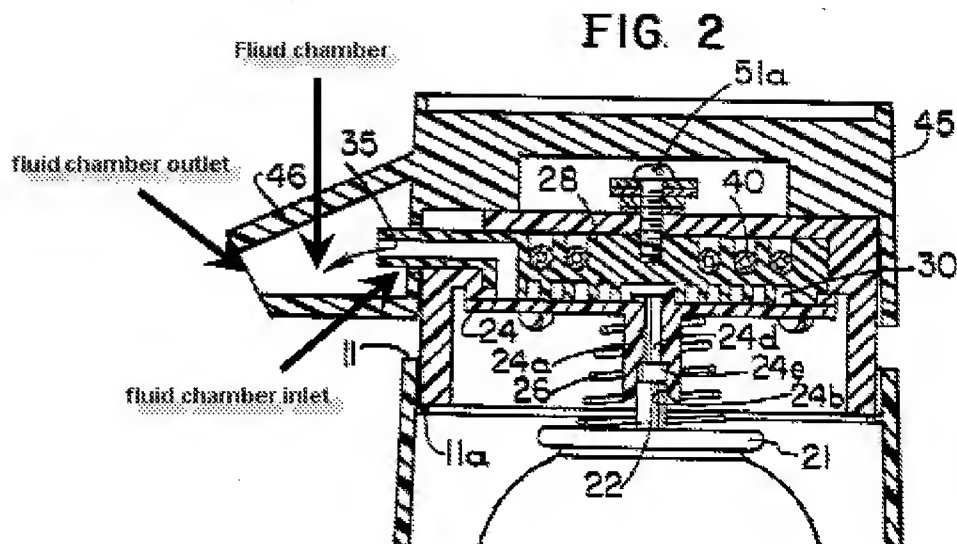


46. The heating device according to claim 22, further comprising a connecting element 20 located at a periphery of the heating device, the connecting element being adapted to connect to a corresponding connecting feature of the continuous flow heater (not shown), wherein the connecting element does not cross a plane that intersects and is parallel to the central area.

Claim 32, 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Baum (US 3710985).

Baum discloses in reference to claim :

32. A continuous flow heater comprising: a heating device including: a heating element 40; and at least one heat exchanging element 28 for the exchange of heat between the heating element and a fluid, the heat exchanging element being connected in a direct heat-conducting manner to the heating element and the fluid so as to transfer the heat generated by the heating element to the fluid, and the heat exchanging element forming an integral housing component of a pressure-resistant and temperature-resistant continuous flow heater and having a substantially planar central area (spiral heating element 40 lies on a plane defined by the bottom of the groove 38) on which the heating element is mounted; and a molded part 45/46 separate from the heating device connected positively to the heating device (see Fig. 2) in a pressure-resistant and thermally stable manner to form a fluid chamber, the molded part having at least one inlet and at least one outlet.



39. A method for producing a continuous flow heater comprising the steps: a. producing a heating device including at least one heating element 40 configured as an electric resistance heater and at least one heat exchanging element 28 for the exchange of heat between the heating element and a fluid, the heat exchanging element being connected in a heat-conducting manner to the heating element and the fluid so as to transfer the heat generated by the heating element to the fluid and the heat exchanging element forming an integral housing component of a pressure-resistant and temperature-resistant continuous flow heater and having a substantially planar central area (spiral heating element 40 lies on a plane defined by the bottom of the groove 38) on which the heating element is mounted; b. producing a molded part 45/46 with at least one inlet and at least one outlet; and c. positively joining the heating device and the molded part so that the assembly is pressure-resistant and thermally stable.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained ~~though~~ the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3742

Claims 23-28, 30-31, 33, 40-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wade in view of Wermbter et al. (US 2004/0074893).

Wade discloses the claimed invention (see above) except:

In reference to claim:

23. The heating device according to claim 22, wherein the heating element comprises a plurality of electrically interconnected heating sections that substantially cover the entire central area except for a mounting area that provides access for mounting through the heating sections. Wermbter discloses: a heating element comprising a plurality of electrically interconnected heating sections that substantially cover the entire central area except for a mounting area that provides access for mounting through the heating sections.

It would have been obvious to replace the heating element in Wade with one as disclosed by Wermbter Fig 1. since is would be an improvement on old technology with newer more efficient and controllable technology.

24. The heating device according to claim 23, wherein the heating element includes at least one heating circuit through electrical connection of corresponding heating sections. See element 17.

25. The heating device according to claim 22, wherein the heating element is formed from a material having a positive temperature characteristic (PTC). It is noted that the NiCr foil heating elements have a region in which they show PTC. Further the use of PTC heating elements is well known and obvious to one of skill.

26. The heating device according to claim 22 and further comprising a temperature monitoring device disposed on the heat exchanging element that is in good heat-conducting connection with the heat exchanging element. The inclusion of temperature monitoring/sensing devices and control therewith is well known and an obvious improvement on a device lacking thereof, furthermore Wermbter discloses the use of a centrally positioned temperature monitoring device. When replacing the older heating element of Wade with the element taught by Wermbter, the monitoring device would obviously be included.

27. The heating device according to claim 26, wherein the heating element comprises a plurality of electrically interconnected heating sections that substantially cover the entire central area except for a mounting area that provides access for mounting through the heating sections and the temperature monitoring element is disposed in the mounting area adjacent to the heating element. It would have been obvious to replace the heating element in Wade with one as disclosed by Wermbter Fig 1. since is would be an improvement on old technology with newer

Art Unit: 3742

more efficient and controllable technology. The inclusion of temperature monitoring/sensing devices and control therewith is well known and an obvious improvement on a device lacking thereof, furthermore Wermbter discloses the use of a centrally positioned temperature monitoring device. When replacing the older heating element of Wade with the element taught by Wermbter, the monitoring device would obviously be included.

28. The heating device according to claim 26, wherein the temperature monitoring element is formed by an NTC resistance. The use of ptc or ntc temp. sensors is known and obvious. As evidence of the well known status of PTC and NTC temperature sensors, see Schilling (US 2002/0011480). Schilling states ... "For producing very readily evaluatable temperature signals the material, whose resistance is used for temperature detection purposes, is appropriately provided with a high temperature coefficient of the electrical resistance and said temperature coefficient can be both positive (PTC) and negative (NTC).

30. The heating device according to claim 22 and further comprising a contacting device disposed on the heat exchanging element that is electrically connected to the electrical elements of the heating element. See Wermbter Fig 1, a1, a0, a2.

31. The heating device according to claim 30, wherein the contacting device is electrically connected to each heating circuit of the heating element and the temperature monitoring device through the control means See Wermbter Fig 1, a1, a0, a2.

33, The continuous flow heater device according to claim 32 and further comprising a temperature monitoring device disposed on the heat exchanging element of the heating device in an area situated close to the inlet in the molded part. The inclusion of temperature monitoring/sensing devices and control therewith is well known and an obvious improvement on a device lacking thereof. The placement at inlet and outlet locations (placement at the outlet being in a central area) is also known to the skilled artisan for obvious reasons of better temperature control. Placement of a temperature monitoring device at the outlet of the heating device, i.e. the inlet of the molded part is similarly obvious. Rearrangement and placement of temperature sensing and monitoring devices is considered to be within the ordinary ingenuity of one of skill in the art.

Wade disclose the fluid heater, Wermbter discloses the specifics of the heating element as claimed, it would have been obvious to one of skill having routine creativity and rational ingenuity to replace the outdated heater of Wade with the more advanced heater of Wermbter since Wade is ready for improvement by known means.

Art Unit: 3742

41, 42, 45. A dishwasher for washing items, the dishwasher comprising: a container for retaining items to be washed; and a continuous flow heater having a heating device and a molded part, the heating device including a heating element and at least one heat exchanging element for the exchange of heat between the heating element and a fluid, the heat exchanging element being connected in a heat-conducting manner to the heating element and the fluid so as to transfer the heat generated by the heating element to the fluid, the heat exchanging element being connected in a heat-conducting manner to the heating element and the fluid so as to transfer the heat generated by the heating element to the fluid and the heat exchanging element forming an integral housing component of a pressure-resistant and temperature-resistant continuous flow heater and having a substantially planar central area on which the heating element is mounted, and the molded part being connected positively to the heating device in a pressure-resistant and thermally stable manner to form a fluid chamber, the molded part having at least one inlet and at least one outlet. The applicant has cited only limited dishwasher structure, that is a container for retaining items to be washed. These types of dishwasher devices are well known in the art. The use of Wade to supply heated water to a dishwasher is an obvious design choice and intended use of the Wade device. The inclusion of temperature monitoring/sensing devices positioned in a central mounting area (see Wermbter) and control therewith is well known and an obvious improvement on a device lacking thereof. The placement at inlet and outlet locations (placement at the outlet being in a central area) is also known to the skilled artisan for obvious reasons of better temperature control.

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wade.

40. The method according to claim 39, wherein joining together the heating device and molded part includes inserting a sealing ring therebetween. The use of sealing rings and gaskets is known in the art and obvious when connecting fluid carrying components. Since the term sealing ring can be very broadly interpreted, the use of a sealing o-ring reads on the claimed invention as would any ring like structure able to effect a fluid seal. Since the outlet of Wade would likely be connected to fluid carrying pipe or hose—read as molded part, one would expect it to be connected to in a sealed manner, typically by the use of a sealing ring or gasket which would protect against leaks that may occur due to temperature changes.

Claims 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baum in view of Wermbter. Baum discloses the claimed invention except for the provision of a temperature sensor centrally located on a mounting area. As Wermbter discloses is it known to

Art Unit: 3742

provide a mounting area in the center of a radial heating element for mounting a temperature sensor. As such the modification of the Baum device to include a centrally mounted temperature sensor would have been obvious to one of skill in the art seeking to monitor the temperature of the fluid being heated.

Allowable Subject Matter

Claims 34-38, 49 are allowed.

Claims 29, 47-48, 50-52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's arguments filed 05/09/2011 have been considered but are not persuasive. Typographical errors and omissions not effecting the scope of the rejection in the previous action have been corrected. Applicant has chosen not to respond to the merits of the rejection based on the applied art. Rather Applicant has chosen to respond only with an accusation that the Examiner failed to comply with 37 CFR 1.104(c)(2). 37 CFR 1.104(c)(2) states:

(2) In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.

The Examiner uses element numbers to point out *the particular part relied on as nearly as practicable*. Applicant statement that no explanation as to how the references are applied is simply incorrect as element numbers and explanations are included in the rejection. Regarding

Art Unit: 3742

applicant's argument that the Examiner did not mention Figure 4 or any other asserted support for the new matter added to the specification, it is noted that applicant bears the burden of specifically showing the support for all amendments—since Figure 4 does not unquestionably show "a plane that intersects and is parallel to the central area", the mere mentioning of Figure 4 without further support is insufficient.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOR CAMPBELL whose telephone number is (571)272-4776. The examiner can normally be reached on Mon, W-F 5:30AM-3:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thor S. Campbell/
Primary Examiner
Art Unit 3742

tsc